ASX ANNOUNCEMENT

19 February 2024

ANSTO Leach Tests continue to deliver Exceptional REE Recoveries at Narraburra Rare Earths Project

- **Second phase of metallurgical testing by ANSTO demonstrates excellent extraction rates of Rare Earth Elements (REE) from composite samples representative of mining intervals**
- **80% - 95% extraction of key magnet REEs (Nd, Pr, Tb, Dy) with best results of Nd 96%, Pr 92%, Tb 91% and Dy 93% - confirming Project's development potential**
- **Significant increase of REE extraction at 50^{0}C for all clay-rich samples compared to 30°C announced previously[1]**
- **Size fraction results show the REEs, including the magnet REEs, are concentrated in the fine size fractions with the -38µm fraction showing an average increase that doubles the Total Rare Earth and Yttrium Oxide (TREYO) grade, suggesting that simple, low cost screening of the ore may significantly enhance the grade for processing of the REE mineralisation**
- **Results will inform the 2024 works program, which may include additional drilling to further define the existing Mineral Resources Estimate and ongoing metallurgical tests**

Godolphin Resources Limited (ASX: GRL) (**Godolphin** or the **Company**) is pleased to advise it has received the final batch of results from the second phase program of leach testing and size fraction analysis undertaken by the Australian Nuclear Science and Technology Organisation (**ANSTO**) on Rare Earth Element (**REE**) mineralisation from the Company's Narraburra Rare Earth Element Project (**Narraburra** or **the Project**), located 12km northeast of Temora in central west New South Wales. This phase of the program covered 15 composite samples representative of mining intervals. Narraburra hosts a **Mineral Resource Estimate (MRE) of 94.9 million tonnes at 739ppm TREYO[2], which includes a higher-grade component of 20 million tonnes at 1,079ppm TREYO in accordance with JORC (2012)** (refer ASX: GRL announcement: 19 April 2023).

Management commentary:

Managing Director Ms Jeneta Owens said:

"We are delighted by these latest leach test results from ANSTO. They support the initial high grade leach results from last year based on individual 1m samples, and now we have achieved exceptional +90% recoveries on composite samples that resemble actual mining intervals. These results demonstrate the excellent leachability of the important magnet minerals from the Narraburra deposit that are an essential component to all electric motors and used widely across the world."

"Along with the recovery rates, Godolphin is also pleased to report excellent results from the first round of size fraction work that have shown we can achieve a significant REE upgrade in the fine fractions. These

[1] Refer ASX: GRL announcement 13 December 2023 "Further encouraging recoveries from Narraburra Leach Testing"
[2] "TREYO" is Total Rare Earth Oxide plus Yttrium Oxide, $La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3$.

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include the targeted magnet elements, which point to an opportunity to upgrade the feed to leaching, which could have a positive effect on the Project's financials."

"We look forward to providing updates on the next steps for Narraburra as we progress this important Project. These metallurgical test results will be key inputs into a mining study, which will further investigate Narraburra's different processing flow sheet options and Project economics."

Metallurgical test work overview:

Godolphin's exploration team selected fifteen (15) composite samples from across the Narraburra Project area and down the REE mineralised profile of two holes. The locations of the holes selected for composite sampling are shown in Figure 2.

Sample preparation at ANSTO was to crush and screen each of the composite samples to 100% passing a 2mm screen to break up the clays. The crushed samples were split to provide a 1kg subsample for leach testing, and a 2kg subsample for size fraction analysis. The remaining material has been retained for future mineralogical work.

Figure 1: Diagnostic leach tests being conducted in the ANSTO Minerals Leach Laboratory, Sydney, NSW.

ANSTO Test Work Methodology:

Leach Methodology

The Phase 1 test program undertaken by ANSTO (refer ASX: GRL announcement: 5 April 2023) indicated that extended leach time at pH 2 produces similar or greater REE extractions than at pH 1 for two hours. The higher pH has potential key advantages including lower acid consumption and reduced costs, with a lower gangue dissolution which is preferrable for downstream impurity removal.

Ten samples were selected from the suite of samples tested in the first round of Phase 2 leach tests for further diagnostic acid leach tests at pH 2 (in ammonium sulphate solution) for 24 hours at 50°C. The results reported in Table 1 are for tests conducted at 50°C along with the results from the first round of leach tests at 30°C that have previously been announced (ASX: GRL Announcement 13 December 2023). The data presented in Figure 3 shows the significant increase in extraction at 50°C for the bulk of the samples.

Each of the ten samples were leached at pH 2 for 24 hours, with intermediate liquor samples to monitor leach kinetics. The test conditions were:

- 0.5 M ammonium sulphate.
- pH 2 maintained using sulphuric acid.
- 24 h residence time.
- 50 °C.
- 4 wt% solids density.
- Intermediate liquor samples at 6 and 12 h.
- Tests were conducted on 80g of dry, pulverised sample.
- Each head sample was analysed by a combination of XRF (at ANSTO), lithium tetraborate fusion digest/ICP-MS (ALS, Brisbane) and four acid digest analysis (ALS, Brisbane) for a range of elements including the target REEs.

Size Fraction Analysis methodology

A 2kg subsample of each of the fifteen composite samples underwent wet and dry screening to generate size fractions for assay. The samples were first wet screened at 38 µm to generate +38 µm and -38 µm fractions. The +38 µm fraction from wet screening was dried and dry screened to generate the following size fractions:

- +1 mm
- +500 µm
- -500/+250 µm
- -250/+125 µm
- -125/+63 µm
- -63/+38 µm
- -38 µm

Each size fraction was analysed by multiple methods, including: XRF at ANSTO; lithium tetraborate fusion digest with ICP-MS; and four acid digest/ICP-MS completed at ALS.

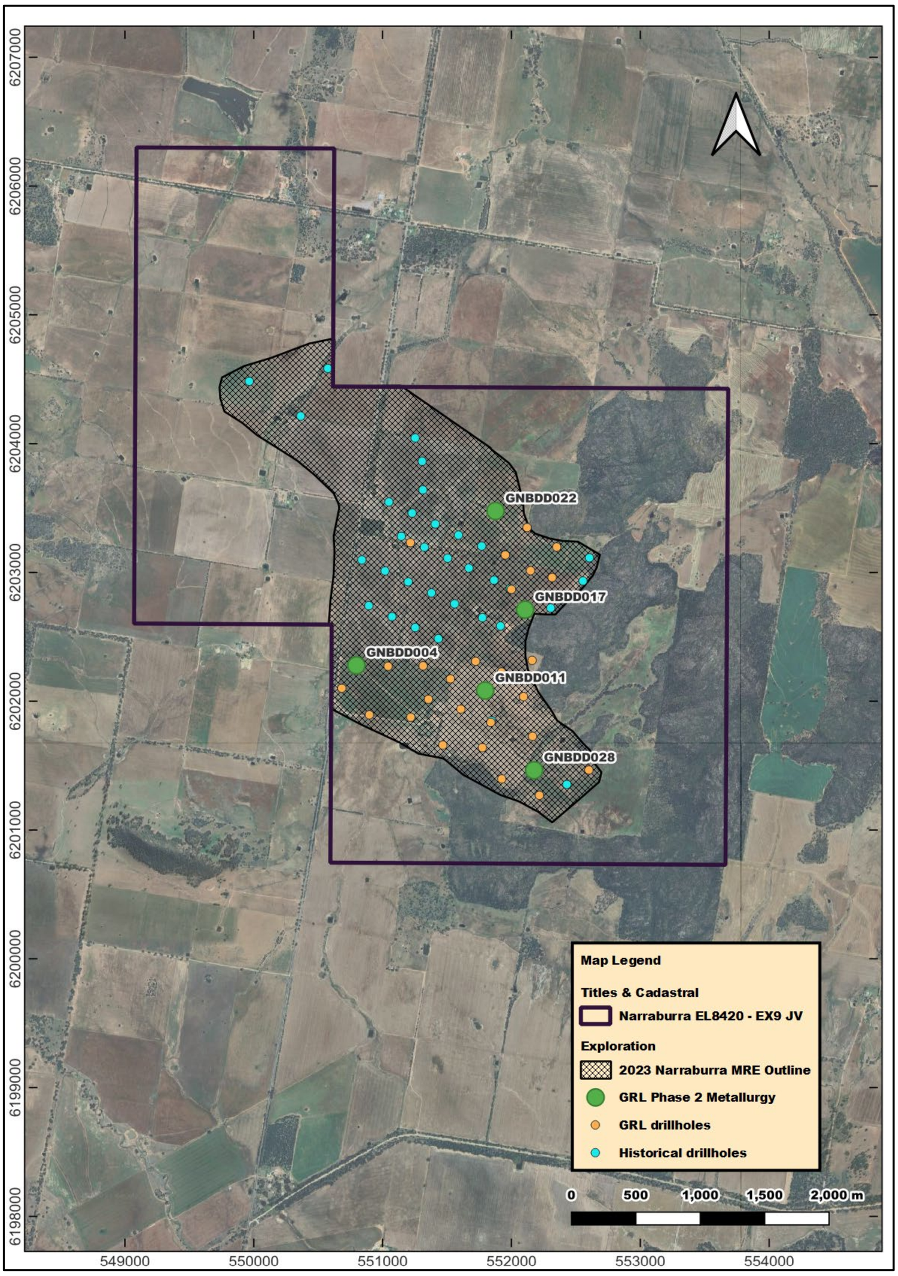

Figure 2: Location of drill holes from which metallurgical samples were selected.

Key Findings:

The results highlight recoveries of up to **92%** of Total REEs plus yttrium (TREY) and **94%** of TREY minus Ce (TREY-Ce), which suggests Ce has a lower extraction rate than other REE mineral species during this testwork. Most importantly are recoveries up to **95%** for key magnet REEs, including individual elements recovering at Pr (92%), Nd (96%), Tb (91%), and Dy (93%). A trend towards heavy REE extraction over light REE's was highlighted from this package of test work.

The testwork continues to show that the REEs are leachable under relatively mild acidic conditions. The kinetics data also continues to show that the leach processes were continuing at the end of the 24-hour test for some samples, with potential for further recovery at longer residence. Leaching at increased temperatures continues to provide superior extraction results.

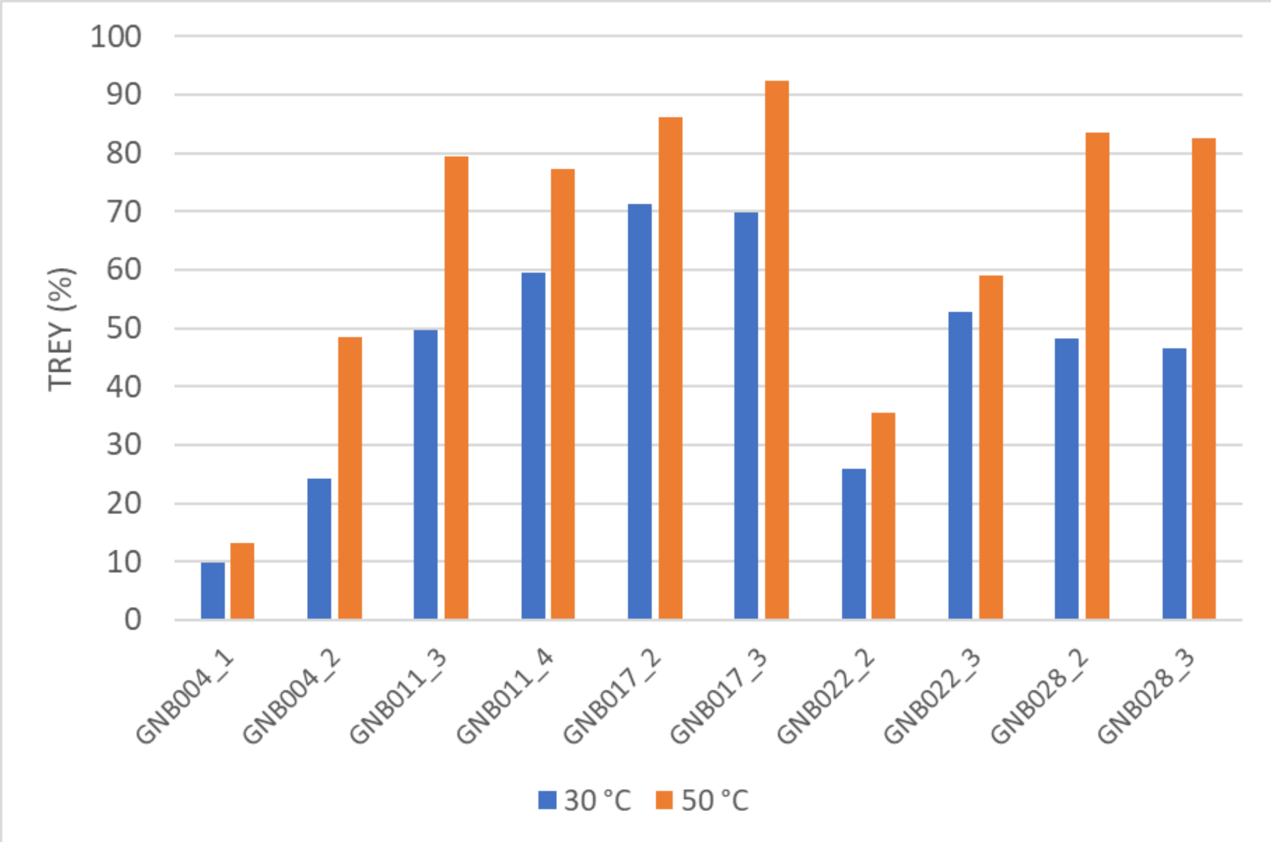

Figure 3: Graph showing the increase in extraction with increased leaching temperatures.

	Conditions				Final Extraction (%)																				
Test ID	Reagent	Target pH	Temperature (°C)	Duration (h)	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Y	LRE	HRE	Magnets	TREY	TREY-Ce
					%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
GD2-6	0.5 M (NH4)2SO4	2	30	24	45	9	43	52	48	105	54	40	42	40	38	27	24	19	53	14	37	45	29	47
GD2-7	0.5 M (NH4)2SO4	2	30	24	45	4	43	48	44	52	59	50	52	52	51	43	38	35	68	9	49	49	27	57
GD2-8	0.5 M (NH4)2SO4	2	30	24	39	19	37	42	40	44	52	48	55	55	58	50	48	40	69	33	51	45	50	55
GD2-9	0.5 M (NH4)2SO4	2	30	24	49	31	50	53	50	70	60	56	62	62	62	56	49	42	72	45	57	55	59	62
GD2-10	0.5 M (NH4)2SO4	2	30	24	74	33	75	82	77	96	79	61	62	54	47	38	35	31	66	42	54	74	50	65
GD2-11	0.5 M (NH4)2SO4	2	30	24	72	47	71	77	72	73	81	74	73	69	69	58	56	47	81	62	70	75	71	76
GD2-12	0.5 M (NH4)2SO4	2	30	24	63	48	60	67	64	64	72	66	72	72	75	67	67	58	83	61	69	67	70	72
GD2-15	0.5 M (NH4)2SO4	2	30	24	9	12	17	24	38	50	61	62	70	68	74	68	71	67	78	16	64	37	53	57
GD2-17	0.5 M (NH4)2SO4	2	30	24	47	40	47	50	46	57	53	50	49	45	43	32	28	26	52	47	46	49	48	49
GD2-18	0.5 M (NH4)2SO4	2	30	24	45	47	42	45	43	47	50	46	47	46	44	34	33	26	51	45	45	45	47	47
GD2-20	0.5 M (NH4)2SO4	2	50	24	58	49	50	54	92	161	59	40	36	26	21	19	16	12	22	55	53	51	48	48
GD2-21	0.5 M (NH4)2SO4	2	50	24	92	32	85	91	87	88	89	78	84	77	74	65	60	48	89	72	79	88	79	87
GD2-22	0.5 M (NH4)2SO4	2	50	24	82	52	82	85	83	95	88	78	79	74	70	61	55	47	81	74	75	82	77	80
GD2-23	0.5 M (NH4)2SO4	2	50	24	90	80	90	95	90	74	95	84	85	78	78	64	62	53	89	87	80	91	86	87
GD2-24	0.5 M (NH4)2SO4	2	50	24	97	77	92	96	95	97	99	91	93	88	87	76	79	62	94	92	91	95	92	94
GD2-26	0.5 M (NH4)2SO4	2	50	24	12	15	20	27	42	50	69	67	77	76	81	75	78	72	88	19	70	41	59	64
GD2-27	0.5 M (NH4)2SO4	2	50	24	91	65	89	92	87	95	90	80	82	70	63	48	40	31	79	88	78	89	83	85
GD2-28	0.5 M (NH4)2SO4	2	50	24	85	69	86	85	84	85	91	80	83	76	70	57	49	40	82	84	81	85	83	83

Table 1: Summary of leach test results at 30° and 50°C.

Note:
Light Rare Earths (LRE) – La, Ce, Pr, Nd
Heavy Rare Earths (HRE) – Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu
Key Magnet Minerals (Magnets) - Pr, Nd, Tb, Dy
Total Rare Earth Elements (TREY) - La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Y
Total Rare Earth Elements minus Cerium (TREY-Ce) - La, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Y
Total Rare Earth Element Oxides (TREYO) - La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3

Clay hosted REE mineralisation is amenable to lower cost processing methods such as direct leaching, which should require relatively low capital expenditure compared to many other sources of REEs currently being mined and explored for in Australia and around the world.

Wet and dry screening was completed to determine the distribution by size fraction of the Rare Earth Minerals present within the deposit of the weathered material. The results show that the Rare Earth Oxide (**REO**) grades vary by size fraction and are significantly higher than the head grade in the -38 µm fraction for the majority of samples, with an average increase in grade of 120%. It was also demonstrated that the target magnet minerals (Nd, Pr, Tb, Dy) were upgraded in this fraction.

Sample GNB022-3, was upgraded from a head grade of 1,613ppm TREYO for the sample to 8,333ppm TREYO in the -38 µm fraction; this represents a 416% increase of TREYO grade and importantly a 445% upgrade to the four magnet minerals (Nd, Pr, Tb, Dy) to this fraction as the highest value recorded in the test program. The sizing data indicated that there is potential to reject coarse material at sizes above a value in the range of 250 to 500 µm reducing mass by up to 40% whilst retaining 80% of the REO containing minerals at an increased REO grade. This will be investigated in future testwork to determine the trade-off between rejecting low grade material and recovery of the REO minerals by leaching specific size fractions.

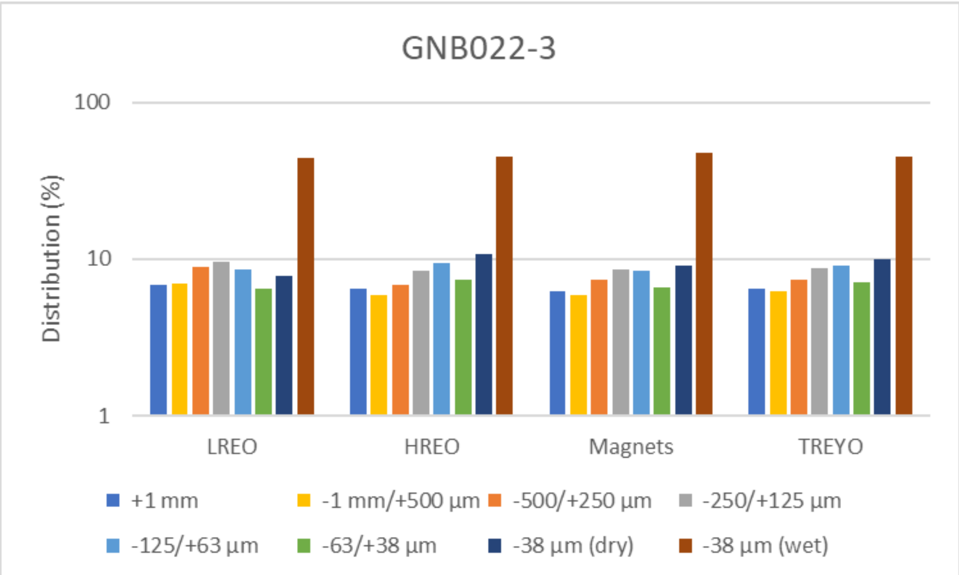

Figure 4: Distribution of REO in the size fractions for sample GNB022-3 (Note Distribution is a logarithmic scale)

Next Steps:

The conditions tested to date are not yet fully optimised for extraction of the REEs, with opportunities to improve leach rates and ultimate recovery over a larger scale metallurgical program. Further work on testing larger sample sizes and different locations in the deposit will be a key component of the metallurgical testing program in the future. Mineralogy on the composite samples is also an important step to understand the variability across the deposit and how this variability may be managed to provide positive project inputs.

All metallurgical test results completed to date will be used as key inputs to future mining studies to develop options for project development. They will assist in defining the 2024 works program, which may include additional drilling to increase the characterisation of the Mineral Resource and further metallurgical testing to provide information on leach solution chemistry and downstream processing options.

<<ENDS>>

This market announcement has been authorised for release to the market by the Board of Godolphin Resources Limited.

For further information regarding Godolphin, please visit https://godolphinresources.com.au/ or contact:

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About Godolphin Resources

Godolphin Resources (ASX: GRL) is an ASX listed resources company, with 100% controlled Australian-based projects in the Lachlan Fold Belt ("LFB") NSW, a world-class gold-copper province. A strategic focus on critical minerals and green metals through ongoing exploration and development in central west NSW. Currently the Company's tenements cover 3,500km^2 of highly prospective ground focussed on the Lachlan Fold Belt, a highly regarded providence for the discovery of REE, copper and gold deposits. Additional prospectivity attributes of GRL tenure include the McPhillamys gold hosting Godolphin Fault and the Boda gold-copper hosting Molong Volcanic Belt.

Godolphin is exploring for REE, structurally hosted, epithermal gold and base-metal deposits and large, gold-copper Cadia style porphyry deposits and is pleased to announce a re-focus of exploration efforts for unlocking the potential of its East Lachlan tenement holdings. Reinvigoration of exploration efforts across the tenement package is the key to discovery and represents a transformational stage for the Company and its shareholders.

COMPLIANCE STATEMENTS: The information in this report that relates to reporting of metallurgical test work results is based on REE exploration information reviewed by Dr Christopher Hartley, a Competent Person who is a Member (#41781) of the Institute of Materials, Minerals and Mining (IoM3) since 1981. The exploration information was compiled by Godolphin Resources Limited (GRL, see secondary CP Statement below). Dr Christopher Hartley is a Non-Executive Director of Godolphin Resources. Dr Hartley has sufficient experience that is relevant to the REE style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person (CP) as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Hartley consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. Dr Hartley's CP Statement is given on the basis that GRL takes responsibility to a Competent Persons level (as given below) for the collection and integrity of the source data.

The actual REE exploration information in this report that relates to Exploration data, Sampling Techniques or Geochemical Assay Methodology is based on information compiled by Ms Jeneta Owens, Competent Person who is a Member of the Australian Institute of Geoscientists. Ms Owens is the Managing Director and full-time employee of Godolphin Resources Limited. Ms Owens has sufficient experience to the activity being undertaken to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Ms Owens consents to the inclusion in the report of the matters based on her information in the form and context in which it appears. Information in this announcement is extracted from reports lodged as market announcements referred to above and available on the Company's website www.godolphinresources.com.au.

The Company confirms that it is not aware of any new information that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcements.

List of Symbols Used

Symbol	Meaning
µm	Micrometre
ANSTO	Australian Nuclear Science and Technology Organisation
C	Centigrade
Ce	Cerium
Dy	Dysprosium
Er	Erbium
Eu	Europium
g	Gram
Gd	Gadolinium
h	Hour
Ho	Holmium
HRE	Heavy Rare Earths (Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu)
ICP-MS	Inductively Coupled Plasma-Mass Spectrometry
JORC (2012)	Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves effective 20 December 2012
kg	Kilogram
La	Lanthanum
LRE	Light Rare Earths (La, Ce, Pr, Nd)
Lu	Lutetium
m	Metre
Magnets	Key Magnet Rare Earths (Pr, Nd, Dy, Tb)
mm	Millimetres
MRE	Mineral Resource Estimate
Nd	Neodymium
NH4 2SO4	Ammonium sulphate
pH	Potential of hydrogen, used to specify the acidity or basicity of aqueous solutions
ppm	Parts per million
Pr	Praseodymium
REE	Rare Earth Element
REO	Rare Earth Oxide
Sm	Samarium
Tb	Terbium
Tm	Thulium
TREY	Total REEs plus yttrium
TREY-Ce	TREY minus Ce
TREYO	Total Rare Earth Oxides plus Yttrium Oxide
wt%	Weight percentage
XRF	X-ray fluorescence
Y	Yttrium
Yb	Ytterbium

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Appendix 1 – JORC Code, 2012 Edition, Table 1 report

Section 1 Sampling Techniques and Data (Criteria in this section applies to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.*	• Each sample was collected from core trays at the Godolphin site in Orange, NSW, ½ PQ core was cut in half resulting in ¼ core. • 1 meter samples were selected based of analysis of lithogeochemistry indicative of ionic clay within the weathered granite profile • Composite samples were based off lithogeochemical analysis of the weathered material types, compositing up to 6 meters into an individual sample for leach testing and size fraction analysis • Entire sample was crushed to 100% pass 2mm at ANSTO – sample split into 1kg for leach testing and 2kg for grade by size testing • Desorption testing at pH 4 was carried out on 3, 1m ¼ PQ core samples under classic ionic clay conditions to determine extractions. Testing conditions were pH 4 (H_2SO_4) for 0.5 h at ambient temp ~22 °C. Tests were conducted on 80 g of dry, pulverised sample core sample • Diagnostic acid leach tests were also carried out on 15 composite samples to determine if the REEs can be extracted at "mild" acidity. Testing conditions were ammonium sulfate at pH 2 (H_2SO_4) for 24 h at 30 °C and 50 °C. Tests were conducted on 80 g of dry, pulverised sample of ¼ core. • 2kg of composite sample underwent wet and dry screening to generate appropriately sized fractions for assay. The samples were first wet screened to break up the clay clumps and generate +38 µm and -38 µm fractions. The +38 µm fractions were collected, dried and further screened at 1000, 500, 250, 125, 63 and 38 µm. • The dry screening generated at total of seven fractions for analysis per sample: ▪ +1 mm ▪ +500 µm ▪ -500/+250 µm ▪ -250/+125 µm ▪ -125/+63 µm ▪ -63/+38 µm ▪ -38 µm
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details.*	• Diamond Drilling - diamond drilling (DD) with PQ core size using a triple tube. All holes were drilled vertically. The collars of completed drill holes have been surveyed with a Differential GPS (DGPS) by a GRL representative to an accuracy of less than 0.77m.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	• Not Applicable as not reporting drilling results, only bench-scale metallurgical test results
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	• Not Applicable as not reporting drilling results, only bench-scale metallurgical test results

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	• The PQ core was split using hand methods for weathered material, which involved using stainless steel tools to split the core in half lengthways. For hard material, a core saw was used to cut the sample in half. As such, ¼ core was used for metallurgical samples.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• All metallurgical leach testing was conducted by ANSTO, • All wet and dry screening was completed by ANSTO, and assayed using XRF at ANSTO, plus four-acid digest with ICP-MS analysis and with a lithium-borate fusion prior to acid dissolution and ICP-MS analysis at ALS Brisbane • Leach samples were assayed using both a four-acid digest with ICP-MS analysis and with a lithium-borate fusion prior to acid dissolution and ICP-MS analysis The lab routinely inserts analytical blanks, standards and duplicates into the client sample batches for laboratory QAQC performance monitoring.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• The lab routinely inserts analytical blanks, standards and duplicates into the client sample batches for laboratory QAQC performance monitoring. • REE oxides were calculated for all reported ICP-MS results. The oxides were calculated according to the following factors listed below: *La2O3: 1.173 (i.e. ppm La x 1.1728 = ppm La2O3); CeO2: 1.2284; Pr6O11: 1.2082; Nd2O3: 1.1664; Sm2O3: 1.1596; Eu2O3: 1.1579; Gd2O3: 1.1526; Tb4O7: 1.1762; Dy2O3: 1.1477; Ho2O3: 1.1445; Er2O3: 1.1435; Tm2O3: 1.1421; Yb2O3: 1.1387; Lu2O3: 1.1371; Y2O3: 1.2699; Ga2O3: 1.3442; HfO2: 1.1793; Nb2O5: 1.4305; Rb2O: 1.0936; ZrO2: 1.3508* • Total rare earth oxide is the industry standard and accepted form of reporting rare earth elements. TREO, TLREO, THREO as calculated as below • TREYO (total rare earth oxide) = La2O3 + CeO2 + Pr6O11 + Nd2O3 + Sm2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Lu2O3 + Y2O3 • TLREO (total light rare earth oxide) = La2O3 + CeO2 + Pr6O11 + Nd2O3 + Sm2O3 • THREO (total heavy rare earth oxide) = Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Lu2O3 + Y2O3
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	• A DGPS was used after drilling to pick up the final collar location: accuracy of less than 0.77 m • Coordinates used are WGS84 and transformed into Map Grid of Australia 1994 Zone 55

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Early-stage drilling program for Narraburra. Target is broad with disseminated flat lying mineralisation above fresh igneous rock, as a result the drill density for this program is representative to indicate variability across the project area.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	• Mineralisation is interpreted to be in flat lying layers associated with weathering profiles of the underlying granite. Vertical orientation of the drillholes was deemed suitable to target mineralisation of this style. • No significant bias is likely as a result of the pattern of intersection angles.
Sample security	• *The measures taken to ensure sample security.*	• The appropriate manifest of sample numbers was submitted to ANSTO. Any discrepancies between sample submissions and samples received are routinely followed up and accounted for.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No external audits have been done on this data.

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.*	**Narraburra** • The Narraburra rare earth and rare metals project is located 12km to the north east of the township of Temora in NSW and has an elevation approximately 315 m above sea-level. • The exploration rights to the project are granted via a JV agreement with EX9, a private entity. • See ASX announcement by Godolphin Resources (ASX: GRL) on 2nd March 2022: "Godolphin Secures Farm-in on Advanced Rare Earth Element Project" • Godolphin currently has 51% ownership of the Narraburra REE project as the initial earn-in period has passed – See ASX announcement by Godolphin Resources (ASX:GRL) on 22nd January 2024 "Godolphin Secures 51% Interest in the Narraburra Rare Earth Project". • The Narraburra rare earth prospect lies on Exploration License number 8420 and is currenty held 100% by EX9. • The land is owned by private land holders northeast of the township of Temora • The security deposit paid by EX9 for EL8420 was $10,000.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	**Narraburra** • See ASX announcements by Godolphin Resources (ASX: GRL) on 2nd March 2022, and Capitol Mining Limited (ASX: CMY) on 9 November 2011 • Previous exploration includes airborne magnetic surveys, re-processing of public Aster data, geological mapping, mineralogical studies, preliminary metallurgical test work, with irregular wide-spaced RAB and RC drilling.
Geology	• *Deposit type, geological setting and style of mineralization.*	**Narraburra** **Geology** • EL8420 is situated over part of the Narraburra Complex, comprising three suites of alkaline granite at the triple junction of the Tumut, Girilambone-Goonumbla and Wagga Zones, central southern New South Wales. EL8420 straddles the northern edge of the junction between the Gilmore Fault and the Parkes Thrust, both structures known for their relationship to precious and base metal mineralisation. The Narraburra rare earth element (REE) mineralisation is hosted within the saprolite cap of highly fractionated Devonian alkaline and peralkaline granites.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*	Drill hole information for drill holes used for the metallurgical samples is presented in the table below

Hole ID	Hole Type	Lease ID	MGA55 East	MGA55 North	MGA_RL	Dip	Depth m
GNBDD004	DD	EL8420	550793.933	6202278.262	302.46	90	62.6
GNBDD011	DD	EL8420	551793.894	6202082.586	320.53	90	53.4
GNBDD017	DD	EL8420	552102.872	6202710.411	325.95	90	44.9

Criteria	JORC Code explanation	Commentary
		GNBDD022 DD EL8420 551874.1 6203476.63 300.05 90 84 GNBDD028 DD EL8420 552173.21 6201464.249 321.97 90 48.4
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.*	• Oxide equivalents have been calculated as discussed above
Relationship between mineralization widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*	• The holes were drilled at an average of -90˚ declination (i.e. vertical) • The mineralisation has been interpreted as relatively flat lying
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and*	• Diagrams pertaining to this program can be found in the body of the attached announcement.

Criteria	JORC Code explanation	Commentary
	appropriate sectional views.	
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Results.*	• Not Applicable as not reporting drilling results, only bench-scale metallurgical test results
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• See ASX announcements by Godolphin Resources (ASX: GRL) on 2nd March 2022, and Godolphin Resources (ASX:GRL) on 11th November 2022, Godolphin Resources (ASX:GRL) on 5h April 2023, Godolphin Resources (ASX:GRL) on 19th April 2023 and Capitol Mining Limited (ASX: CMY) on 9 November 2011
Further work	*The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	• Mineralogical studies of the composite samples to assist in interpretation of the results and variability across the deposit Further exploration activities, including additional step-out drilling are currently under assessment

Appendix 2 – Summary Leach Results

		Conditions				Final Extraction (%)																				
Feed Solid	Test ID	Reagent	Target pH	Temperature (°C)	Duration (h)	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Y	LRE	HRE	Magnets	TREY	TREY-Ce	TREY : Al
						%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	Ratio
GNB007	GD2-1	0.5 M (NH4)2SO4	4	22	0.5	3	2	4	3	4		12	16	16	19	20	14	13	7	22	3	15	10	17	18	0.16
GNB008	GD2-2	0.5 M (NH4)2SO4	4	22	0.5	2	0	6	7	16		16		15	24	13		6		17	1	12	9	2	10	0.02
GNB009	GD2-3	0.5 M (NH4)2SO4	4	22	0.5	1	0	1	1	2		4		3		5		2		4	0	3	2	1	2	0.03
GNB004_1	GD2-4	0.5 M (NH4)2SO4	2	30	24	12	8	9	11	9	18	12	8	10	6	9	11	7	10	10	10	9	10	10	10	0.04
GNB004_2	GD2-5	0.5 M (NH4)2SO4	2	30	24	29	39	24	27	22	26	24	20	17	14	13	13	9	6	13	29	18	25	24	23	0.40
GNB011_1	GD2-6	0.5 M (NH4)2SO4	2	30	24	45	9	43	52	48	105	54	40	42	40	38	27	24	19	53	14	37	45	29	47	0.14
GNB011_2	GD2-7	0.5 M (NH4)2SO4	2	30	24	45	4	43	48	44	52	59	50	52	52	51	43	38	35	68	9	49	49	27	57	0.44
GNB011_3	GD2-8	0.5 M (NH4)2SO4	2	30	24	39	19	37	42	40	44	52	48	55	55	58	50	48	40	69	33	51	45	50	55	1.27
GNB011_4	GD2-9	0.5 M (NH4)2SO4	2	30	24	49	31	50	53	50	70	60	56	62	62	62	56	49	42	72	45	57	55	59	62	1.37
GNB017_1	GD2-10	0.5 M (NH4)2SO4	2	30	24	74	33	75	82	77	96	79	61	62	54	47	38	35	31	66	42	54	74	50	65	0.16
GNB017_2	GD2-11	0.5 M (NH4)2SO4	2	30	24	72	47	71	77	72	73	81	74	73	69	69	58	56	47	81	62	70	75	71	76	0.31
GNB017_3	GD2-12	0.5 M (NH4)2SO4	2	30	24	63	48	60	67	64	64	72	66	72	72	75	67	67	58	83	61	69	67	70	72	0.83
GNB022_1	GD2-13	0.5 M (NH4)2SO4	2	30	24	3	3	3	4	4	6	7	8	10	7	11		8		13	3	7	5	5	6	0.02
GNB022_2	GD2-14	0.5 M (NH4)2SO4	2	30	24	3	5	5	8	15	21	28	30	36	37	39	36	38	37	42	6	31	14	26	27	0.58
GNB022_3	GD2-15	0.5 M (NH4)2SO4	2	30	24	9	12	17	24	38	50	61	62	70	68	74	68	71	67	78	16	64	37	53	57	0.37
GNB028_1	GD2-16	0.5 M (NH4)2SO4	2	30	24	53	4	50	56	50	86	54	36	33	26	22	17	14	10	36	13	26	43	23	35	0.06
GNB028_2	GD2-17	0.5 M (NH4)2SO4	2	30	24	47	40	47	50	46	57	53	50	49	45	43	32	28	26	52	47	46	49	48	49	1.02
GNB028_3	GD2-18	0.5 M (NH4)2SO4	2	30	24	45	47	42	45	43	47	50	46	47	46	44	34	33	26	51	45	45	45	47	47	1.72
GNB004_1	GD2-19	0.5 M (NH4)2SO4	2	50	24	15	12	13	14	14	18	16	16	14	12	12	11	9	10	13	13	13	14	13	14	0.04
GNB004_2	GD2-20	0.5 M (NH4)2SO4	2	50	24	58	49	50	54	92	161	59	40	36	26	21	19	16	12	22	55	53	51	48	48	0.55
GNB011_3	GD2-21	0.5 M (NH4)2SO4	2	50	24	92	32	85	91	87	88	89	78	84	77	74	65	60	48	89	72	79	88	79	87	1.41
GNB011_4	GD2-22	0.5 M (NH4)2SO4	2	50	24	82	52	82	85	83	95	88	78	79	74	70	61	55	47	81	74	75	82	77	80	1.20
GNB017_2	GD2-23	0.5 M (NH4)2SO4	2	50	24	90	80	90	95	90	74	95	84	85	78	78	64	62	53	89	87	80	91	86	87	0.26
GNB017_3	GD2-24	0.5 M (NH4)2SO4	2	50	24	97	77	92	96	95	97	99	91	93	88	87	76	79	62	94	92	91	95	92	94	0.74
GNB022_2	GD2-25	0.5 M (NH4)2SO4	2	50	24	4	6	7	10	20	26	38	41	50	51	54	51	54	51	57	7	43	20	35	37	0.52
GNB022_3	GD2-26	0.5 M (NH4)2SO4	2	50	24	12	15	20	27	42	50	69	67	77	76	81	75	78	72	88	19	70	41	59	64	0.30
GNB028_2	GD2-27	0.5 M (NH4)2SO4	2	50	24	91	65	89	92	87	95	90	80	82	70	63	48	40	31	79	88	78	89	83	85	1.21
GNB028_3	GD2-28	0.5 M (NH4)2SO4	2	50	24	85	69	86	85	84	85	91	80	83	76	70	57	49	40	82	84	81	85	83	83	2.11

Appendix 3 – Summary Size Fraction Results

Sample ID	Size (µm)	Mass (wt%)	Distribution (%)						Head (ppm)	<38 um (ppm)	% Upgrade to <38 µm
			Al	Ca	LREO	HREO	MREO	TREO	TREYO	TREYO	TREYO
GNB004-1	+1 mm	24	12	7	13	9	9	12	672	1636	143
	-1 mm/+500 µm	16	8	4	10	7	7	9			
	-500/+250 µm	12	8	5	7	7	6	7			
	-250/+125 µm	11	10	11	7	9	7	7			
	-125/+63 µm	8	9	13	7	8	7	7			
	-63/+38 µm	5	6	9	10	7	8	9			
	-38 µm (dry)	1	2	3	3	3	3	3			
	-38 µm (wet)	23	45	48	44	51	53	46			
GNB004-2	+1 mm	29	23	25	16	17	16	17	1493	3628	143
	-1 mm/+500 µm	19	15	17	11	11	10	11			
	-500/+250 µm	14	12	13	8	9	8	9			
	-250/+125 µm	9	9	10	6	6	6	6			
	-125/+63 µm	5	5	6	4	5	4	4			
	-63/+38 µm	2	2	2	2	2	2	2			
	-38 µm (dry)	1	1	1	1	2	1	2			
	-38 µm (wet)	22	34	26	52	49	53	50			
GNB011-1	+1 mm	24	12	15	31	17	17	24	864	960	11
	-1 mm/+500 µm	20	11	16	18	13	12	15			
	-500/+250 µm	13	9	5	12	11	9	11			
	-250/+125 µm	7	7	6	9	9	8	8			
	-125/+63 µm	3	4	5	4	5	5	4			
	-63/+38 µm	2	2	3	2	3	4	3			
	-38 µm (dry)	0.4	1	1	1	1	1	1			
	-38 µm (wet)	30	55	50	23	43	44	33			
GNB011-2	+1 mm	22	9	11	30	16	16	25	2899	3456	19
	-1 mm/+500 µm	19	11	7	20	14	13	17			
	-500/+250 µm	15	13	7	13	11	10	12			
	-250/+125 µm	9	10	6	7	7	7	7			
	-125/+63 µm	3	4	3	3	3	3	3			
	-63/+38 µm	1	2	2	1	2	2	2			
	-38 µm (dry)	0.4	1	1	1	1	1	1			
	-38 µm (wet)	29	51	64	25	46	47	34			
GNB011-3	+1 mm	27	16	8	22	17	18	18	1927	4524	135
	-1 mm/+500 µm	23	18	10	20	16	16	17			
	-500/+250 µm	16	16	9	13	13	12	12			
	-250/+125 µm	10	12	10	9	9	9	9			
	-125/+63 µm	6	7	5	5	5	5	5			
	-63/+38 µm	3	4	4	3	3	3	3			
	-38 µm (dry)	1.1	2	2	2	2	2	2			
	-38 µm (wet)	15	25	53	27	35	36	33			
GNB011-4	+1 mm	27	24	12	21	18	20	19	1398	3511	151
	-1 mm/+500 µm	24	23	11	16	16	16	16			
	-500/+250 µm	17	17	13	14	14	13	13			
	-250/+125 µm	11	11	13	11	11	11	11			
	-125/+63 µm	6	6	9	8	7	8	7			
	-63/+38 µm	3	3	6	5	4	4	4			
	-38 µm (dry)	1.2	1	3	3	2	3	2			
	-38 µm (wet)	11	14	34	23	27	26	27			
GNB017-1	+1 mm	27	7	5	28	11	11	21	734	1038	41
	-1 mm/+500 µm	17	7	6	15	9	8	13			
	-500/+250 µm	11	9	6	11	13	9	11			
	-250/+125 µm	9	9	6	7	9	7	8			
	-125/+63 µm	6	7	7	6	6	7	6			
	-63/+38 µm	4	5	5	5	6	9	5			
	-38 µm (dry)	1.5	2	2	3	3	6	3			
	-38 µm (wet)	25	53	63	25	43	42	34			
GNB017-2	+1 mm	24	5	6	18	9	10	12	894	2214	148
	-1 mm/+500 µm	18	9	3	13	8	9	10			
	-500/+250 µm	14	13	5	10	9	8	9			
	-250/+125 µm	11	12	5	8	8	7	7			
	-125/+63 µm	7	9	7	6	7	6	6			
	-63/+38 µm	4	5	6	5	5	5	5			
	-38 µm (dry)	1.4	2	3	3	3	4	3			
	-38 µm (wet)	21	45	66	37	52	52	48			
GNB017-3	+1 mm	24	6	4	12	8	9	9	2179	5698	161
	-1 mm/+500 µm	19	14	5	13	11	12	11			
	-500/+250 µm	14	13	6	10	9	9	9			
	-250/+125 µm	10	11	6	8	7	7	8			
	-125/+63 µm	8	9	7	7	7	7	7			
	-63/+38 µm	4	5	5	5	5	6	5			
	-38 µm (dry)	1.7	2	4	4	4	4	4			
	-38 µm (wet)	18	38	64	41	48	47	47			
GNB022-1	+1 mm	3	1	1	10	3	2	7	572	499	-13
	-1 mm/+500 µm	5	2	2	11	5	4	9			
	-500/+250 µm	5	3	3	9	5	5	8			
	-250/+125 µm	7	5	6	8	7	6	8			
	-125/+63 µm	14	12	13	9	9	8	9			
	-63/+38 µm	13	14	13	6	7	6	7			
	-38 µm (dry)	8.5	10	9	5	6	6	5			
	-38 µm (wet)	45	53	53	42	58	62	46			
GNB022-2	+1 mm	10	4	2	4	4	4	5	3982	7916	99
	-1 mm/+500 µm	17	8	4	8	7	7	7			
	-500/+250 µm	15	11	6	7	7	7	7			
	-250/+125 µm	12	12	11	8	7	7	7			
	-125/+63 µm	9	11	12	7	7	7	7			
	-63/+38 µm	6	9	9	5	5	5	5			
	-38 µm (dry)	6.3	9	10	10	10	10	10			
	-38 µm (wet)	25	36	47	51	52	52	51			
GNB022-3	+1 mm	19	16	18	7	6	6	7	1613	8333	416
	-1 mm/+500 µm	17	13	13	7	6	6	6			
	-500/+250 µm	18	14	12	9	7	7	7			
	-250/+125 µm	16	16	16	10	8	9	9			
	-125/+63 µm	11	14	16	9	9	8	9			
	-63/+38 µm	6	8	9	7	7	7	7			
	-38 µm (dry)	3.6	5	5	8	11	9	10			
	-38 µm (wet)	9	14	10	45	45	48	45			
GNB028-1	+1 mm	21	9	4	25	12	14	18	566	704	24
	-1 mm/+500 µm	20	8	3	16	18	15	16			
	-500/+250 µm	14	8	6	11	16	15	13			
	-250/+125 µm	9	8	4	8	10	9	9			
	-125/+63 µm	6	7	6	6	6	6	6			
	-63/+38 µm	4	5	5	4	4	4	4			
	-38 µm (dry)	1.2	2	2	2	2	2	2			
	-38 µm (wet)	25	54	69	27	33	34	33			
GNB028-2	+1 mm	24	16	8	20	18	19	19	1970	4459	126
	-1 mm/+500 µm	24	18	5	17	17	17	17			
	-500/+250 µm	17	17	6	13	14	13	13			
	-250/+125 µm	10	11	10	10	10	10	10			
	-125/+63 µm	7	9	9	8	8	8	8			
	-63/+38 µm	4	6	6	5	5	5	5			
	-38 µm (dry)	1.8	2	4	3	3	3	3			
	-38 µm (wet)	12	21	52	24	25	25	25			
GNB028-3	+1 mm	34	31	21	31	29	30	30	2943	8721	196
	-1 mm/+500 µm	23	22	13	19	19	19	19			
	-500/+250 µm	16	17	13	13	13	13	13			
	-250/+125 µm	10	11	13	9	10	9	9			
	-125/+63 µm	6	7	10	6	7	6	7			
	-63/+38 µm	3	4	6	4	4	4	4			
	-38 µm (dry)	1.7	2	5	3	3	3	3			
	-38 µm (wet)	5	7	20	14	15	15	15			